

**Five new species of *Ageratina* (Asteraceae: Eupatorieae) from Oaxaca, Mexico**

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**ABSTRACT**

Five new taxa of *Ageratina* are described from Oaxaca, Mexico: ***Ageratina cuicatlan*** B.L. Turner, sp. nov.; ***Ageratina etlana*** B.L. Turner, sp. nov.; ***Ageratina megaphylla*** B.L. Turner, sp. nov.; ***Ageratina pauciflora*** B.L. Turner, sp. nov.; ***Ageratina tejalpana*** B.L. Turner, sp. nov. Photographs of the types are presented, along with appropriate maps showing their distribution (vis a vis closely related taxa). [www.phytologia.org](http://www.phytologia.org) *Phytologia* 95(2): 141 - 150 (May 1, 2013).

**KEY WORDS:** Asteraceae, Eupatorieae, Mexico, Oaxaca, *Ageratina*.

Preoccupation with the study of a potpourri of Mexican Asteraceae from the state of Oaxaca, sent to the author by SERBO for identification, has occasioned the present paper.

**AGERATINA CUICATLANA** B.L. Turner sp. nov. **Fig. 1**

**Stiffly erect perennial herbs** to 40 cm high. **Stems** pubescent with minute coarse hairs, the vestiture ca 0.2 mm high. **Leaves** (upper) mostly alternate, 2-4 cm long, 1-2 cm wide; petioles 0.5-1.0 cm long; blades ovate, both surfaces somewhat glutinous and glandular-punctate, glabrous or nearly so, 3-nervate from the very base, the margins minutely serrate. **Capitulescence** a terminal cymose panicle ca 8 cm high, 3-8 cm wide, the ultimate peduncles 5-15 mm long. **Heads** cylindric, ca 7-8 mm high, 3-5 mm wide; involucre bracts ca 10, 2-seriate, linear-lanceolate, 3-nervate. **Receptacle**, plane, viscid, ca 1 mm across. **Florets** 8-10 per head; corollas white, glabrous, 4-5 mm long; tubes ca 2 mm long, the 5 lobes ca 1 mm long. **Achenes** viscid, apically pubescent, ca 2 mm long; pappus of ca 40 stiff, persistent, somewhat tawny bristles ca 5 mm long.

**TYPE: MEXICO. OAXACA: Distrito Cuicatlan, Mpio. San Juan Bautista Cuicatlan**, "12.9 km de la Cieneguilla, bajada a Santa Catarina Tlaxila." ca 2095 m, 17 29 43.5 N, 97 00 1.1 W, "Selva baja caducifolia secundario." 8 Nov 2001, *Silvia H, Salas M. 4353* [with Schibli & Chemnick] (Holotype: MEXU; isotype: TEX). **Map 1**

This species belongs to the subgenus *Neogreenella*, nesting among the alternate leafed complex, somewhere near ***A. hyssopifolia*** (Gray) King & Rob. and ***A. thrysiflora*** (Greene) King & Rob., to which it will key in my treatment of *Ageratina* for Mexico (Turner 1997); the latter two taxa are confined to northwestern Mexico, and bear little resemblance to the present novelty.

The name refers to the Distrito Cuicatlan, whence the type.

**AGERATINA ETLANA** B.L. Turner, sp. nov. **Fig. 2**

**Perennial herbs** to 1 m high. **Stems**, densely glandular-pubescent, the vestiture ca 0.3 mm high. **Leaves** (upper) 6-7 cm long, 2-3 cm wide; petioles 1.5-3.0 cm long; blades ovate-lanceolate, 3-nervate from the base, upper surfaces weakly pubescent, lower surfaces glandular pubescent, mainly along the veins, the margins serrulate. **Capitulescence** a terminal cymose panicle of 10-20 heads, 3-4 cm high, 4-5 cm across, the ultimate peduncles 5-10 mm long, beset with 3-6 linear bracts. **Heads**, 4-5 mm high, 5-6 mm wide; involucre bracts 2-seriate, 3-4 mm long, linear-lanceolate, markedly glandular-pubescent. **Florets** ca 40 per head; corollas glabrous, ca 4 mm long, pinkish white (dried); tubes much-narrowed, 1.5- 2.0

mm long; throat campanulate, ca 1.5 mm long; lobes 5, ca 0.5 mm long, glabrous, or nearly so. **Anthers** yellow, the appendages ovate. **Achenes**, black, glabrous, ca 1.5 mm long; pappus of ca 20 readily deciduous bristles ca 4 mm long.

**TYPE: MEXICO. OAXACA: Distrito Etlá, Mpio. San Felipe Tejalapa, “El Timbre,”** ca 1819 m, 17 03 06.4 N, 96 53 39.4 W, 14 Feb 2012, *Mario Cruz Cruz* [MAC] 878 (holotype: TEX). **Map 2**

According to the collector, the plant occurred in a “Bosque de pino-encino. orilla de río.”

In my treatment of *Ageratina* for Mexico, largely because of its densely glandular-pubescent stems and foliage, the novelty will key to *A. zunilana* (Standl. & Steyerl.) King & Rob., a species of Chiapas and Guatemala having much larger heads (7-8 mm high vs 4-5 mm), pubescent achenes (vs glabrous), among yet other characters.

The name refers to the Distrito Etlá, whence the Type.

### **AGERATINA MEGAPHYLLA** B.L. Turner, *sp. nov.* **Fig. 3**

**Shrubs** 2 m high. **Stems** (upper), ca 5 mm thick, densely pubescent with tawny, spreading hairs, the vestiture 1-2 mm high. **Leaves** (mid-stem), opposite, ca 17 cm long, 9 cm wide; petioles 2.5-3.0 cm long, pubescent like the stems; blades broadly ovate, pinnately nervate, sparsely pubescent above, more densely so below, especially along the venation; margins irregularly serrate. **Capitulescences** axillary, cymose-paniculate, the ultimate peduncles mostly 2-5 mm long. **Heads**, 4-5 mm high; involucre bracts lanceolate, 4-5 mm long, ca 0.5 mm wide, apically acute, sparsely pubescent. **Florets**, ca 20 per head; corollas, ca 3 mm long, glabrous, except for the pubescent lobes. **Achenes** (immature) ca 2 mm long, sparsely pubescent; pappus of ca 30, very fragile, ciliate, white bristles ca 3 mm long.

**TYPE: MEXICO. OAXACA: Distrito Etlá; Mpio. San Felipe Tejalapa.** Captación de agua El Negro. “Bosque de pino-encino. Orilla de arroyo, en cascajo negro.” 17.1 25.7 N, 96.55 0.7 W, ca 2210 m, 17/02/2012, *Mario Cruz Cruz* [MC] 993 (Holotype: TEX). **Map 1**

In my treatment of *Ageratina* (subgenus *Ageratina*) for Mexico (Turner 1997), the present novelty will key to or near *A. peracuminata* King & Rob., an herbaceous species of south-central Oaxaca having much thinner, smaller, somewhat deltoid, sparingly pubescent, leaf blades. *Ageratina megaphylla* is described by its collector, as a shrub “2 m” high; it is perhaps best recognized by its large leaves (hence the appellation), and densely pubescent stems and petioles.

### **AGERATINA PAUCIFLORA** B.L. Turner, *sp. nov.* **Fig. 4**

“**Arbol**” to 3 m high. **Leaves** (upper) opposite, pinnatinervate, 12-18 cm long, 5-7 cm wide; petioles 2-3 cm long, narrowly winged and grading into the blades, glabrous and glandular-punctate above and below, their margins irregularly serrate. **Capitulescence**, a terminal, cymose-panicle ca 5 cm high, 7 cm wide, the ultimate peduncles minutely glandular pubescent, viscid, 2-5 mm long. **Heads** narrowly campanulate, 6-7 mm high, ca 3 mm wide; involucre ca 4 mm long, composed of 5-7, linear-lanceolate, bracts arranged in 2 series, their apices acute to obtuse. **Florets** 2-4(5) per head, glabrous; corollas white, glabrous, ca 3 mm long; throat ca 0.75 mm long, the lobes 5, ca 1 mm long. **Stamens** scarcely exerted, if at all, anthers yellow, their apices ovate, ca as wide as long. **Achenes** ca 2 mm long, glabrous; pappus of ca 20 persistent bristles, ca 4 mm long.

**TYPE: MEXICO. OAXACA: Distrito, Sola de Vega, Mpio. Santiago Textitlan.** “Paraje La Fragua.” ca 2335 m, 16 47 12.1 N, 97 18 57.4 W, 14 Mar 2007, *Arturo Sanchez Martinez 2079* [with Ana Ruiz & Mayra Hernandez] (Holotype: TEX)

The species reportedly occurs in pine-oak forests. It is named for its relatively few-flowered heads.

*Ageratina pauciflora* clearly belongs to the *A. ligustrina* (DC.) King & Rob. complex, a wide-ranging, highly variable assemblage, as envisioned by Turner (1997). It can be readily separated from the former by its very large leaves, smaller, fewer-headed capitulescences, and smaller heads with fewer florets. The distribution of the two taxa in Oaxaca also differs, as indicated in **Map 4**.

#### **AGERATINA TEJALAPANA** B.L. Turner, *sp. nov.* **Fig. 5**

**Perennial herbs** to “1 m” high. **Mid-stems** minutely pubescent. **Leaves** opposite, 4-5 cm long, 3-4 cm wide; petioles 5-12 mm long, pubescent like the stems; blades subcordate, glabrous above and below, or nearly so; margins serrate, the teeth obtuse to rounded. **Capitulescence** a terminal, cymose panicle, ca 25 cm high and as wide, the ultimate peduncles 1-4 cm long. **Heads** campanulate, 5-6 mm high, ca 8 mm across; involucre bracts biseriate, the bracts linear-lanceolate, glabrous, 4-5 mm long, 1.0-1.5 mm wide, the apices acute to obtuse. **Florets** white, 50-60 per head; corollas ca 3.5 mm long, glabrous, except for the pubescent lobes. **Achenes** (immature) sparsely pubescent, ca 1.5 mm long; pappus of ca 20 readily deciduous white bristles ca 3 mm long.

**TYPE: MEXICO. OAXACA: Distrito Etlá, Mpio. San Felipe Tejalapa,** “Loma de la Mina. Bosque de Encino-pino, sobre cerro, suelo amarillo.” 17 04 9.4 N, 96 53 23.9 W, ca 1833 m, 17 Oct 2011, *Cleotilde Cervantes Morales* [CLEO] 558 (Holotype: TEX).

This novelty will key to *A. choriccephala* in my treatment of Mexican *Ageratina* (Turner 1997), a more northern species having a smaller capitulescence with smaller, fewer-flowered heads and fewer involucre bracts. Distribution of the two taxa is shown in **Map 4**.

The species name derives from the Mpio. San Felipe Tejalapa, whence the Type.

As noted by Turner (2010), “*Ageratina* is perhaps the most speciose genus of the Asteraceae in Mexico;” with description of the five taxa herein, the generic number currently stands at ca 190.

#### **ACKNOWLEDGEMENTS**

Thanks to SERBO for the collections concerned, and to my close consort, Jana Kos, for editing the paper. The distribution map is based upon collections at LL-TEX).

#### **LITERATURE CITED**

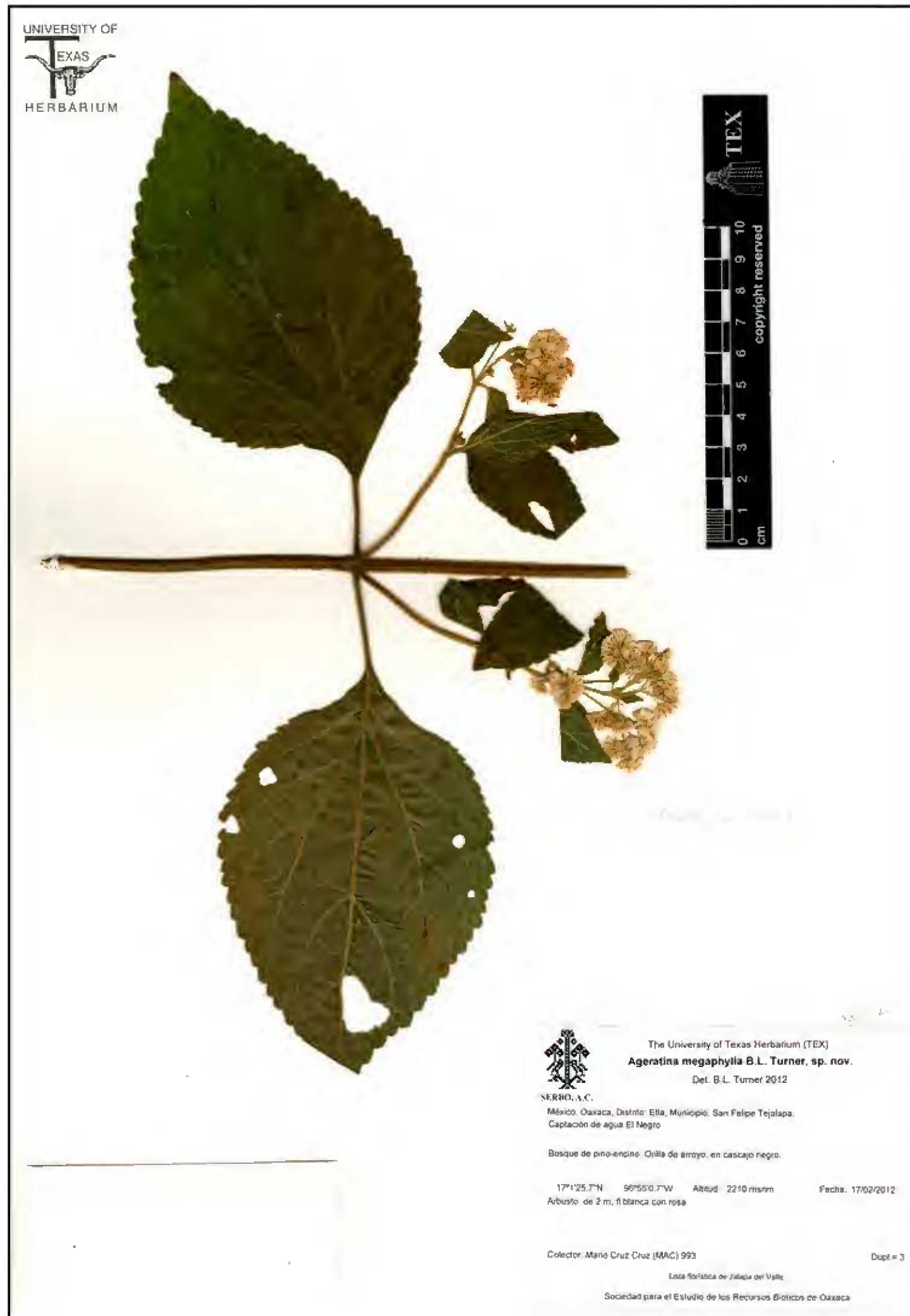
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**Fig. 1** *AGERATINA CUICATLANA* B.L. Turner **sp. nov.**



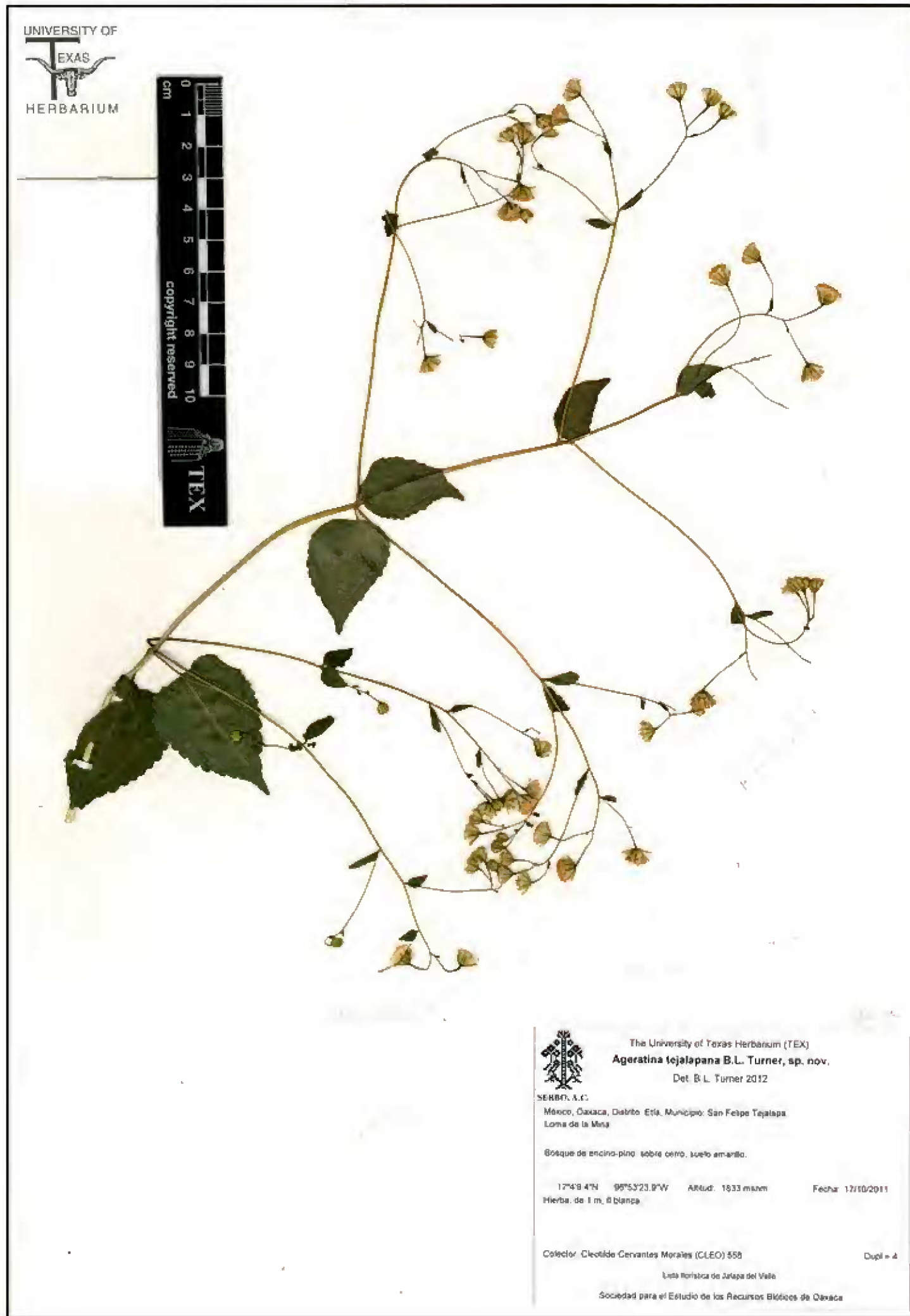
Fig. 2 AGERATINA ETLANA B.L. Turner, sp. nov.



**Fig. 3** *AGERATINA MEGAPHYLLA* B.L. Turner, **sp. nov.**



Fig. 4 AGERATINA PAUCIFLORA B.L. Turner, sp. nov.



**Fig. 5** *AGERATINA TEJALAPANA* B.L. Turner, *sp. nov.*



